

WE CLAIM:

1. A method for automatically tracking the rerouting of logical circuit data in a data network, the method comprising:

generating current reroute statistics upon the rerouting of logical circuit data from one or more failed logical circuits to one or more logical failover circuits in the data network, the current reroute statistics including trap data received for the one or more failed logical circuits in the data network.

generating a table for presenting the current reroute statistics without manual intervention;

generating updated rerouted statistics, the updated reroute statistics including updated trap data received for the one or more failed logical circuits in the data network; and

updating the table with the updated reroute statistics without manual intervention.

2. The method of claim 1 further comprising generating a billing report including the updated reroute statistics.

3. The method of claim 1, wherein the updated reroute statistics are generated upon the restoration of the one or more failed logical circuits in the data network.

4. The method of claim 1, wherein each of the one or more failed logical circuits and each of the one or more logical failover circuits in the data network is identified by a logical circuit identifier.

5. The method of claim 4, wherein the trap data comprises the logical identifier for each of the one or more failed logical circuits and the logical identifier for each of the one or more logical failover circuits.

6. The method of claim 4, wherein the trap data comprises a current utilization of each of the one or more logical failover circuits.

7. The method of claim 4, wherein the trap data comprises the number of hops taken by each of the one or more logical failover circuits.

8. The method of claim 4, wherein the trap data comprises a quality of service parameter for each of the one or more logical failover circuits.

9. The method of claim 8, wherein the quality of service parameter comprises at least one of:

an unspecified bit rate;
a variable bit rate; and
a committed bit rate.

10. The method of claim 4, wherein the logical circuit identifier is a data link connection identifier (DLCI).

11. The method of claim 4, wherein the logical circuit identifier is a virtual path/virtual circuit identifier (VPI/VCI).

12. The method of claim 1, wherein at least one of the one or more logical circuits is a permanent virtual circuit.

13. The method of claim 1, wherein at least one of the one or more logical failover circuits is a permanent virtual circuit.

14. The method of claim 1, wherein at least one of the one or more logical circuits is a switched virtual circuit.

15. The method of claim 1, wherein at least one of the one or more logical failover circuits is a switched virtual circuit.

16. The method of claim 1, wherein the data network is a frame relay network.

17. The method of claim 1, wherein the data network is an asynchronous transfer mode (ATM) network.

18. A system for automatically tracking the rerouting of logical circuit data in a data network, the system comprising:

at least one network device for rerouting logical circuit data between one or more failed logical circuits to one or more logical failover circuits in the data network;

a logical element module, in communication with the at least one network device, for receiving trap data generated by the at least one network device; and

a network management module, in communication with the logical element module, for:

generating current reroute statistics upon the rerouting of logical circuit data from the one or more failed logical circuits to the one or more logical failover circuits, the current reroute statistics including the trap data received by the logical element module;

generating a table for presenting the current reroute statistics without manual intervention;

generating updated reroute statistics, the updated reroute statistics including the trap data received from the logical element module; and

updating the table with the updated reroute statistics without manual intervention.

19. The system of claim 18 wherein the network management module is further operative to generate a billing report including the updated trap data.

20. The system of claim 18, wherein the updated trap data is generated upon the restoration of the one or more failed logical circuits in the data network.

21. The system of claim 18, wherein each of the one or more failed logical
5 circuits and each of the one or more logical failover circuits in the data network is identified by a logical circuit identifier.

22. The system of claim 21, wherein the trap data comprises the logical
10 identifier for each of the one or more failed logical circuits and the logical identifier for each of the one or more logical failover circuits.

23. The system of claim 21, wherein the trap data comprises a current utilization of each of the one or more logical failover circuits.

15 24. The system of claim 21, wherein the trap data comprises the number of hops taken by each of the one or more logical failover circuits.

25. The system of claim 21, wherein the trap data comprises a quality of
20 service parameter for each of the one or more logical failover circuits.

26. The system of claim 25, wherein the quality of service parameter
comprises at least one of:

25 an unspecified bit rate;
a variable bit rate; and
a committed bit rate.

27. The system of claim 21, wherein the logical circuit identifier is a data link connection identifier (DLCI).

28. The system of claim 21, wherein the logical circuit identifier is a virtual path/virtual circuit identifier (VPI/VCI).